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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,107

03/26/2004

Hironobu Fukui

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05/03/2007

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EXAMINER

LEWIS, MONICA

ART UNIT

PAPER NUMBER

2822

MAIL DATE

DELIVERY MODE

05/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/811,107

Applicant(s)

FUKUI, HIRONOBU

Examiner

Monica Lewis

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This restriction is in response to the election filed February 12, 2007.

Election/Restrictions

2. This application contains claims directed to the following patentably distinct species of the claimed invention:

Embodiment I (Claims 1-4), directed to a semiconductor having a metal oxide MOS transistor comprising an additional load capacitance that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the part that is vulnerable to soft errors is a first diffusion layer region and the first diffusion layer region is at least a part of diffusion layer regions formed in the MOS transistor structure and is connected to neither a power supply nor a ground;

Embodiment II (Claims 1 and 5), directed to a semiconductor having a metal oxide MOS transistor comprising an additional load capacitance that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the MOS structure includes at least a n-type MOS transistor;

Embodiment III (Claims 1 and 6), directed to a semiconductor having a metal oxide MOS transistor comprising an additional load capacitance that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the MOS is a SRAM having a flip-flop circuit that comprises a plurality of n-type MOS transistors and a plurality of p-type MOS transistors;

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Embodiment IV (Claims 1 and 7), directed to a semiconductor having a metal oxide MOS transistor comprising an additional load capacitance that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the MOS includes at least a n-type MOS and a p-type MOS transistor;

Embodiment V (Claims 1 and 8), directed to a semiconductor having a metal oxide MOS transistor comprising an additional load capacitance that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the MOS is a SPAM having a flip-flop circuit that comprises a plurality of n-type MOS transistors and a plurality of p-type MOS transistors;

Embodiment VI (Claims 9-12), directed to a semiconductor having a metal oxide MOS transistor comprising a buried well region that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the part is vulnerable to soft errors is a first diffusion layer region, and the first diffusion layer region is at least a part of diffusion layer regions formed in the MOS type transistor structure and is connected to neither power supply nor a ground;

Embodiment VII (Claims 9 and 13), directed to a semiconductor having a metal oxide MOS transistor comprising a buried well region that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the MOS structure includes at least a n-type MOS transistor;

Embodiment VIII (Claims 9, 14 and 16), directed to a semiconductor having a metal oxide MOS transistor comprising a buried well region that is formed at a part of the semiconductor device which is vulnerable to soft errors wherein the

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MOS is a SRAM having a flip-flop circuit that comprises a plurality of n-type

MOS transistors and a plurality of p-type MOS transistors; and

Embodiment IX (Claims 9 and 15), directed to a semiconductor having a metal oxide MOS transistor comprising a buried well region that is formed at a part of the semiconductor device which is vulnerable to soft errors comprises a plurality of n-type MOS transistors and a plurality of p-type MOS transistors.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

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examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee under 37 CFR 1.17(i).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 571-272-1838. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular and after final communications.

ML
April 25, 2007


MONICA LEWIS
PRIMARY PATENT EXAMINER